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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,812	02/21/2006	Stanislaw Bodzak	R306456	7230

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EXAMINER	
JACOBS, TODD D	

ART UNIT	PAPER NUMBER
3746	

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11/23/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/568,812	BODZAK, STANISLAW	
	Examiner	Art Unit	
	TODD D. JACOBS	3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 September 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *10-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This office action is in response to the amendment of 9/22/2009. Note that in making the below office action, the examiner has considered and addressed each of the applicant's arguments/amendments.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 10-29 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 states “the valve piston is offset from a connecting line between the axes of rotation of the two delivery elements”. However, there appears to be lacking support for this in the specification, and further, it appears that this is simply not true in this application. The specification states: “the bore 56… is preferably situated offset from a connecting line 58 between the rotation axes 25, 27 of the gears 16, 18 by a measurement H in the direction of the pressure chamber 42". As seen in Fig 3, the **center** of the bore 56 and valve piston 60 is in fact offset from the connecting line 58. However, while its center may be, valve piston 60 is not offset from the connecting line as shown in Fig 3. Although depth is not really shown in Fig 3, note that these axes (25 and 27) extend indefinitely into/out of the page (and so, the connecting line can be in/out of the page at any point, since it is merely connecting those two axes as defined in the claim), and therefore no matter the depth of the valve piston 60 as shown in Fig 3, it will **not** be offset from a connecting line, because the connecting line in fact intersects the

valve piston. For the purposes of this examination, it will be assumed that the valve piston is in fact offset from connecting line.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 10-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 10 line 2 states "which at two rotary driven delivery elements are contained, which delivery elements deliver fluid...". However, because of the grammar mistakes above, it is unclear what the applicant is attempting to claim. For the purposes of this examination, it will be interpreted that the above be "which two rotary driven delivery elements are contained, wherein the delivery elements deliver fluid..." Further line 5, although not clear, appears to need the "and having" that was amended to be canceled in order to make grammatical sense. Similarly, line 10 states "a filter preceding" but it appears that it needs to be "wherein a filter…" or "the fluid pump also has a filter…" This claim is replete with similar errors and should be corrected to overcome the claims indefiniteness. Further, the use of and/or 10 is rendered indefinite because it is not clear if this is being used as "and", "or" or "and or or". For the purposes of this examination, just as examined before, it will be interpreted that this is "and or or". It is recommended that the language of "and or or" is not used, but alternate wording to clear confusion in the claim is used.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 10-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant admitted prior art (AAPA) in view of Zenith (GB 750,673).

8. In re claim 10, AAPA describes "in a fluid pump for use in a fuel injection apparatus of an internal combustion engine and having a housing that contains a pump chamber in which at least one rotary driven delivery element is contained, which delivery element delivers fluid to a pressure chamber from an intake chamber connected to a reservoir, and having a pressure limiting valve for limiting the pressure prevailing in the pressure chamber, which valve has a valve piston inside the housing, the valve piston being acted on in the closing direction by a prestressed closing spring and being acted on in the opening direction by the pressure prevailing in the pressure chamber and, when a predetermined pressure in the pressure chamber is exceeded, opens a connecting conduit from the pressure chamber to the intake chamber, and a filter preceding the fluid pump and/or a filter, following the fuel pump" (claim 10 lines 1-10 of the instant application). **Note further the discussion of "Prior Art" on page 1 of the specification, specifically in paragraph 3, line 15, "usually the pump is preceded by a filter…or is followed by a filter".**

9. However, AAPA fails to describe the improvement wherein the fluid pump comprises a *pressure chamber* having a connection to a region downstream of the preceding filter or a connection to a region downstream of the following filter, and wherein the pressure prevailing in the pressure chamber influences the force on the valve piston in the closing direction in such a way that as the pressure in the pressure chamber decreases, the force on the valve piston in the closing direction increases.

10. Nevertheless, Zenith, with reference to figure 3 below, describes a fluid pump with a pressure chamber (25) wherein the pressure prevailing in the pressure chamber (25) influences the force on the valve piston (23) in the closing direction in such a way that as the pressure in the pressure chamber (25) decreases, the force on the valve piston (23) in the closing direction increases. The advantage of this pressure chamber, as described by Zenith on page 1, line 34 is to “provide in a pump of this type an exact regulation of the pump delivery pressure”.

Fig. 4

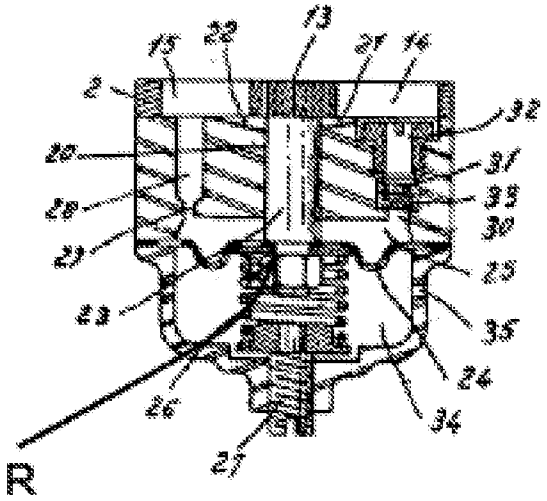


Fig. 1

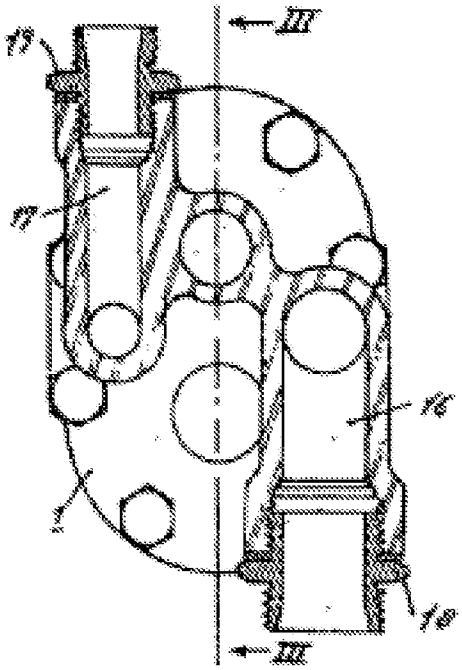


Fig. 2

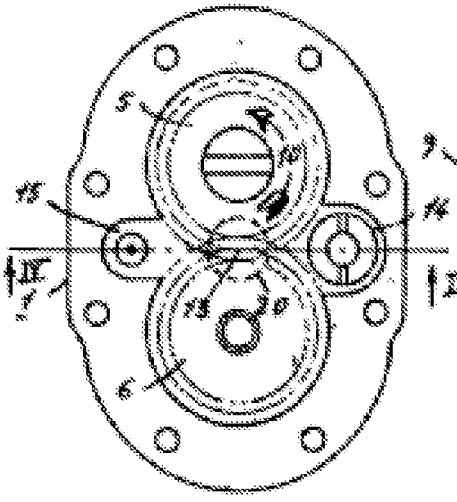
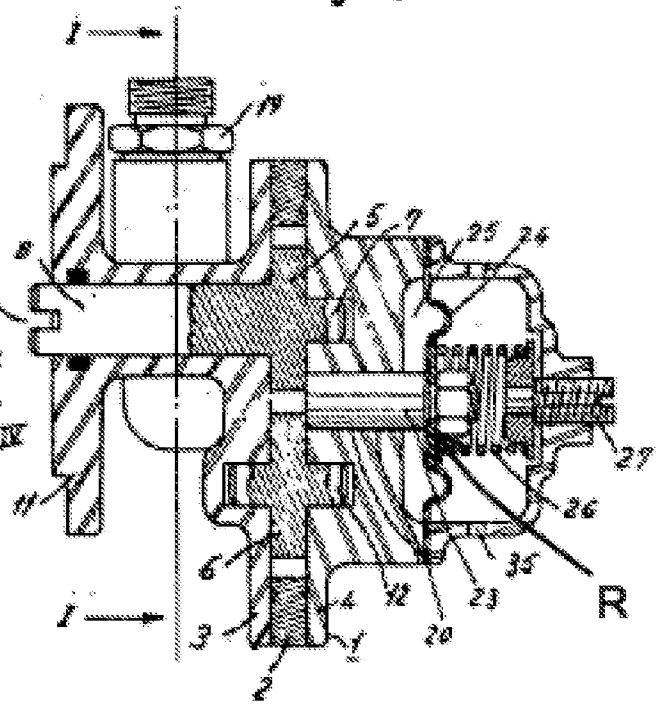


Fig. 3



11. Therefore it would be obvious to one having ordinary skill in the art at the time of the invention to add a pressure chamber as described by Zenith wherein the pressure prevailing in the pressure chamber influences the force on the valve piston in the closing direction in such a way that as the pressure in the pressure chamber decreases, the force on the valve piston in the closing direction increases in order to regulate the pump delivery pressure.

12. Note that while Zenith does not disclose the pressure chamber having a connection to a region downstream of the preceding filter or a connection to a region downstream of the following filter, if combined with AAPA described above, Zenith's pressure chamber would inherently have a connection to a region downstream of the preceding filter or a connection to a region downstream of the following filter.

13. Note further that the combination of AAPA/Zenith will inherently consist of **the valve piston being offset from a connecting line between the axes of rotation of the two delivery elements**. Fig.3 above clearly shows this because the axes of rotation of 5 and 6 extend left/right for a far length at least as far as the rotors themselves, but actually, an infinite distance. One can see above that at the far left portion of each rotor, 5 and 6, if a connecting line were to be made between those points, the piston valve would certainly be offset from that line.

14. In re claim 11, with reference to figure 3 above, Zenith discloses the pressure chamber (25) delimited by a moving wall (24), one side of which is acted on by the pressure prevailing in the pressure chamber (25) and the other side of which is acted on by a prestressed spring (26) that pushes the wall (24) toward the valve piston (23) in its closing direction.

15. In re claim 12, Zenith discloses the moving wall (24) supported against the valve piston (23) by means of a rod (R).

16. In re claims 13-14, with reference to figure 3 above, Zenith discloses the moving wall (24) is embodied in the form of a diaphragm.

17. In re claims 15-18, with reference to figures 2 and 3, Zenith discloses the valve piston (23) at least partially delimiting the pump chamber (13) in the direction of the rotation axis of the at least one delivery element (5, 6), wherein the closing spring (26) presses the valve piston (23) against the end surface of the at least one delivery element (5, 6) oriented toward it, which end surface functions as a valve seat, and wherein the pressure prevailing in the pressure chamber (25) acts on at least part of the end surface of the valve piston (23) oriented toward the at least one delivery element (5, 6).

18. In re claims 19-21, with reference to figures 2 and 4, Zenith discloses a connecting conduit (21) between the delivery chamber (13) and the intake chamber (14) embodied in the form of a groove let into a housing part facing the end surface of the at least one delivery element (5, 6) and the valve piston controls the passage through this groove.

19. In re claim 22, with reference to figure 4, Zenith discloses that as pressure in the delivery chamber (13) increases, the valve piston (23) opens an ever greater through flow cross section in the connecting conduit (21).

20. In re claims 23-24, with reference to figure 4, Zenith discloses the diameter of the valve piston (23) greater than the width of the connecting conduit (21).

21. In re claims 25-29, Zenith discloses the valve piston (23) guided so that it is able to move in a bore (23, 25, 34) of a housing part, and wherein the intake chamber (14) is connected to a chamber (25) that is delimited in the bore (23, 24, 34) by the rear surface of the valve piston (23) oriented away from the end surface of the at least one delivery element (5, 6).

Response to Arguments

22. Applicant's arguments filed have been fully considered but they are not persuasive. Applicant argues that "the Zenith reference does not lead directly to the characteristics of claim 10 in terms of the embodiment that the pressure chamber communicates with a region downstream of the filter an [sic] thus a compensation for different pressure drops is effected by the filter." However, the underlined above is not claimed and therefore hasn't been given patentable weight in the office action. Arguments regarding the piston being offset from a connecting line between the axes of rotation of the two delivery elements has been discussed above.

Conclusion

23. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TODD D. JACOBS whose telephone number is 571-270-5708. The examiner can normally be reached on Monday - Friday, 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on 571-272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devon C Kramer/
Supervisory Patent Examiner, Art Unit 3746

/TODD D. JACOBS/
Examiner, Art Unit 3746